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## **GOLD, CRUDE OIL, AND CRYPTOCURRENCIES VERSUS STOCK INDEX FUTURES: AN ANALYSIS OF HEDGING STRATEGIES IN GLOBAL STOCK MARKETS**

### **Abstract:**

The study aims to verify the hedging ability of gold, cryptocurrencies, and crude oil to serve as hedging instruments against stock market risk. We compare the hedging effectiveness of these popular assets with stock index futures contracts. As a hedging strategy, we understand a pair-wise portfolio consisting of a long position in stocks and a short position in a hedging instrument put together to minimize the portfolio variance. We conclude that hedging strategies using stock index futures contracts provide an efficient hedging mechanism for investors aiming to protect their stock portfolios. Unlike stock index futures contracts, the effectiveness of hedging with gold, crude oil, and cryptocurrencies is low in most sub-periods. Hence, from a risk minimization perspective, investors have no incentive to implement gold, cryptocurrencies, or crude oil in hedging strategy against stock market risk.

### **Keywords:**

futures market hedging; hedging effectiveness; optimal hedge ratio; variance-optimal hedging

**JEL Classification:** C58, G15, G11